



SMC-02-398

December 15, 2003

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: | Serial No. 10/669,516 09/24/03 |
Dun-Nian Yaung et al.
QUANTUM EFFICIENCY ENHANCEMENT FOR
CMOS IMAGING SENSOR WITH BORDERLESS
CONTACT
| _____ |

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.

The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being
deposited with the United States Postal Service as first class
mail in an envelope addressed to: Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450, on December 19, 2003.

Stephen B. Ackerman, Reg.# 37761

Signature/Date SB. Ackerman 12/19/03

U.S. Patent 6,040,592 to McDaniel et al., "Well to Substrate Photodiode for Use in a CMOS Sensor on a Salicide Process," discloses a photodiode and isolation process.

U.S. Patent 6,372,603 to Yaung et al., "Photodiode with Tightly-Controlled Junction Profile for CMOS Image Sensor with STI Process," discloses a sensor and STI process.

U.S. Patent 6,130,422 to Bawolek et al., "Embedded Dielectric Film for Quantum Efficiency Enhancement in a CMOS Imaging Device," discloses an embedded dielectric film for an image device.

The following two U.S. Patents both describe a borderless contact process with an etch stop:

- 1) U.S. Patent 6,406,987 to Huang, "Method for Making Borderless Contacts to Active Device Regions and Overlaying Shallow Trench Isolation Regions."
- 2) U.S. Patent 6,258,712 to Wang, "Method for Forming a Borderless Contact."

Sincerely,

A handwritten signature in black ink, appearing to read "SBA", written over the word "Sincerely,".

Stephen B. Ackerman,
Reg. No. 37761

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Doccket Number (Optional) TSMC-02-398	Application Number 10/669,516
	Applicant Dun-Nian Young et al.	
	Filing Date 09/24/03	Group Art Unit

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

OTHER DOCUMENTS (Including Author, Title, Date, Portion or Pages, Etc.)

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.